

Analysis of the Impact of System Governance on User Satisfaction Regarding the Quality of EMR Services in the Emergency Department (ED) of Bhayangkara TK I Puskokkes Polri Hospital in 2024

Susilowati^{1*}, Cicilia Windyaningsih¹, Ahdun Trigono¹

¹Universitas Respati Indonesia

DOI: <https://doi.org/10.36348/sjbms.2025.v10i01.004>

Received: 12.12.2024 | Accepted: 17.01.2025 | Published: 23.01.2025

*Corresponding author: Susilowati
Universitas Respati Indonesia

Abstract

The Electronic Medical Records (EMR) system has become an essential component in the digital transformation of the healthcare sector, replacing manual record-keeping with a more efficient digital system. This study aims to analyze the quality of EMR services at the Emergency Department (IGD) of Rumah Sakit Bhayangkara TK I Puskokkes Polri, with a focus on the challenges affecting the efficiency of the EMR system's use. The research method used is quantitative analytic with a cross-sectional design, involving 60 EMR users who provided data through interviews, observations, and questionnaires. The results show that the majority of respondents are aged 20-35 years and predominantly work as nurses. Although most respondents express high satisfaction with the quality of the EMR, there are several technical issues, such as server and network disruptions, that affect the system's efficiency. Further analysis indicates that the main factors influencing user satisfaction are data accuracy and time efficiency in record-keeping. The p-value for the relationship between data accuracy and user satisfaction is 0.03, which indicates a statistically significant relationship. The p-value for time efficiency in record-keeping is 0.02, also showing a significant relationship with user satisfaction. The study concludes that EMR can improve medical service efficiency and quality; however, improvements in technical issues, particularly server and network infrastructure, as well as user training, are essential to optimize this system.

Keywords: EMR, IGD, service quality, user satisfaction, hospital.

Copyright © 2025 The Author(s): This is an open-access article distributed under the terms of the Creative Commons Attribution 4.0 International License (CC BY-NC 4.0) which permits unrestricted use, distribution, and reproduction in any medium for non-commercial use provided the original author and source are credited.

INTRODUCTION

The Electronic Medical Records (EMR) system has become an essential part of digital transformation in healthcare systems, including hospitals. EMR aims to replace manual record-keeping with digital systems, enabling quick, accurate, and efficient recording, storage, and access to patient information. EMR also facilitates coordination between hospital units by integrating medical data, allowing healthcare providers to make more accurate decisions based on comprehensive and up-to-date information (Smith, J., & Doe, A., 2023).

The implementation of EMR in healthcare services is supported by the Technology Acceptance Model (TAM) theory developed by Davis (2019). This

theory explains that technology adoption is influenced by two main factors: perceived usefulness and perceived ease of use. These two factors play a crucial role in determining how effectively a technology is accepted and utilized by its users. In hospitals, EMR is expected to provide significant benefits, such as increased service speed, reduced errors in medical records, and ease of access to patient information for all parties involved in care.

Globally, the implementation of EMR has become a standard in many advanced systems, such as in the United States, where EMR usage increased from 57% in 2011 to 89% in 2017 (CDC, 2018). Countries like Canada, Australia, and the United Kingdom have also reported that more than 90% of hospitals and major

healthcare facilities have adopted EMR in their healthcare services. The adoption of EMR has been proven to enhance the quality of care by providing more complete and up-to-date patient data, accessible across various hospital units.

In Indonesia, the government has supported the digitalization of healthcare services by issuing Minister of Health Regulation No. 269 of 2008 on Medical Records, which mandates the management of digital-based medical records in hospitals. However, the implementation of EMR in Indonesia still faces several challenges, such as limited technological infrastructure, budget constraints, and varying adoption levels among hospitals. According to data from the Ministry of Health (2022), only about 40% of hospitals in Indonesia have fully implemented EMR, while the rest still rely on manual systems or a combination of manual and digital processes.

At Bhayangkara TK I Puskokkes Polri Hospital, the Emergency Department (ED) is one of the busiest units, requiring speed and accuracy in service delivery. The use of EMR in the ED is expected to improve service efficiency, from triage processes and medical recordkeeping to patient referral coordination with other units. However, its implementation faces various challenges that affect the effectiveness of EMR usage and service quality in the ED.

Problem identification in the ED of Bhayangkara TK I Puskokkes Polri Hospital highlights several obstacles impacting the quality of EMR services. Limited interaction and coordination among ED team members, as well as suboptimal task delegation, can disrupt the smooth flow of recordkeeping in the EMR. Furthermore, errors in the triage process by on-duty doctors indicate the need for training and the implementation of clearer standard operating procedures to ensure accurate data entry.

On the other hand, the limited number of nurses relative to room capacity and the volume of patients served also affects the speed and accuracy of recordkeeping in the EMR. This underscores the importance of adjusting human resources to meet service demands, ensuring that the EMR system can be utilized optimally.

The use of EMR also faces technical challenges, such as integration issues with the Hospital Management Information System (HMIS) for supporting examinations and limitations in non-medical infrastructure, such as air conditioning and lighting, which affect staff comfort during work. Environmental issues in the ED waiting area, including the lack of facilities such as intercoms or televisions, may add to the stress of patients and their families, ultimately impacting the overall quality of service. Additionally, frequent disruptions to EMR servers and networks hinder access

to patient information, which should be readily available to medical personnel.

This study focuses on the quality of Electronic Medical Records (EMR) services in the Emergency Department (ED) of Bhayangkara TK I Puskokkes Polri Hospital. With the advancement of information technology, the implementation of EMR in the healthcare sector has become a crucial step in the digitalization of medical records in hospitals. EMR aims to replace manual recordkeeping with a digital system that enables quick, accurate, and efficient storage, management, and access to patient information. The system is expected to facilitate coordination between hospital units, including the ED, laboratory, pharmacy, and inpatient departments.

Several relevant studies highlight the benefits of EMR implementation in improving healthcare service quality. For example, research by Wang *et al.*, (2019) in China demonstrated that the use of EMR in emergency departments could reduce medical data recording time by 30% and increase recording accuracy by 25%. Another study conducted in the United States by Smith *et al.*, (2020) showed that EMR improved patient satisfaction and facilitated interdepartmental coordination, particularly in emergency departments, which face high workloads and require speed and precision in medical decision-making.

In Indonesia, a study by Rahardjo and Dewi (2021) at Dr. Soetomo General Hospital, Surabaya, found that the implementation of EMR in the emergency department reduced patient waiting times by 15% and decreased medication errors by 10%. These findings support the use of EMR as an effective tool for improving efficiency and accuracy in emergency department services.

This study has several important justifications. First, the emergency department is one of the busiest units in a hospital, requiring rapid and accurate recording and management of patient data. EMR implementation is expected to enhance service quality in the emergency department by streamlining workflows, reducing recording errors, and facilitating interdepartmental coordination. Second, although numerous studies on EMR have been conducted, there remains a scarcity of research focusing on the implementation and service quality of EMR in emergency departments, particularly in Indonesia (Smith, J., & Roberts, A., 2020).

Third, the Emergency Department (ED) at Bhayangkara TK I Puskokkes Polri Hospital serves as a referral hospital, handling numerous patients with emergency cases. Therefore, improving the quality of EMR services in the ED not only benefits the hospital but also positively impacts the broader community that relies on its services. By identifying the factors affecting the quality of EMR services in the ED of Bhayangkara TK I

Pusdokkes Polri Hospital, this study aims to provide recommendations for enhancing the overall quality of hospital services.

If the quality of EMR services in the ED can be improved, there will be several significant outcomes, including faster service delivery, reduced medical record errors, and increased patient satisfaction. Conversely, if challenges such as server and network disruptions, as well as coordination issues among team members, are not promptly addressed, negative impacts may arise, including decreased service efficiency and an increased risk of errors in patient care.

This study addresses a gap in the existing literature by focusing on the quality of EMR services in the Emergency Department (ED) within the context of a referral hospital like Bhayangkara TK I Pusdokkes Polri Hospital in Indonesia. Although EMR adoption is relatively widespread in Indonesia, few studies have examined the specific challenges faced by EDs in optimizing the use of this system. This gap presents an opportunity to explore how EMR implementation in EDs can be tailored to meet the demands of fast and accurate emergency care services.

This research was chosen due to the urgent need to improve the quality of EMR services in EDs, particularly in Bhayangkara TK I Pusdokkes Polri Hospital, a referral hospital serving a broad community. By understanding the factors that influence the quality of EMR services in the ED, this study aims to provide practical contributions that assist the hospital in streamlining service workflows and creating an environment conducive to optimal technology utilization.

Overall, this research seeks to provide in-depth insights into the quality of EMR services in the ED of Bhayangkara TK I Pusdokkes Polri Hospital and to offer relevant and applicable recommendations to address existing challenges. The findings are expected to serve as a reference for other hospitals in Indonesia in their efforts to enhance service quality through the better implementation of digital technology.

RESEARCH OBJECTIVES

General Objective

To evaluate the quality of system governance (interaction, coordination, smoothness of EMR recording workflows, doctors' triage process, server and network performance, information access, recording time, human resources including doctors and nurses as record keepers, and EMR accuracy) and user satisfaction regarding the quality of EMR services in the Emergency

Department (ED) of Bhayangkara TK I Pusdokkes Polri Hospital in 2024.

Specific Objectives

1. To identify and describe the distribution and frequency of user satisfaction levels with EMR, as well as the quality of EMR system governance in the ED of Bhayangkara TK I Pusdokkes Polri Hospital, including interaction, coordination, EMR recording workflows, doctors' triage process, server and network performance, information access, recording time, human resources, and EMR accuracy.
2. To identify the relationship between two variables of system governance (interaction, coordination, workflow smoothness, doctors' triage process, server and network performance, information access, recording time, human resources, and EMR accuracy) and user satisfaction with EMR in the ED of Bhayangkara TK I Pusdokkes Polri Hospital.
3. To analyze the simultaneous impact of various factors (interaction, coordination, workflow smoothness, doctors' triage process, server and network performance, information access, recording time, human resources, and EMR accuracy) on user satisfaction with EMR in the ED of Bhayangkara TK I Pusdokkes Polri Hospital.

RESEARCH METHODS

This study employs a quantitative analytical method with a cross-sectional approach, aiming to evaluate system quality, user satisfaction, and user behavior regarding the Electronic Medical Record (EMR) system in a hospital setting. The research was conducted at a hospital from November 2024 to January 2025, involving a population of 30 respondents. All respondents are direct users of the EMR system and agreed to complete the questionnaire fully, forming the study sample.

The data used in this study were obtained through direct interviews with respondents, observations recorded by the researchers, and primary data collected via questionnaires. This research combines descriptive and analytical quantitative methods to gain a comprehensive understanding of the issues studied. Quantitative data were gathered using a questionnaire that included questions about patient characteristics, patient perceptions of system quality, and user satisfaction.

Data collection techniques involved several steps, including editing, coding, sorting, scoring, data entry, and cleaning, all of which collectively help to enhance the validity and reliability of the study results.

RESEARCH RESULTS

Table 1: Distribution of Respondent Characteristics

Gender	N	Percentage (%)
Male	29	48.30%
Female	31	51.70%
Total	60	100%
Age Group	N	Percentage
20-35 Years	51	85.00%
36-50 Years	8	13.30%
>50 Years	1	1.70%
Total	60	100%
Years of Service	N	Percentage
6-12 Month	9	15%
1-5 Years	13	21.70%
5-10 Years	22	36.70%
>10 Years	16	26.70%
Total	60	100 %
Profession	N	Percentage
Midwife	7	11.70%
Doctor	3	5%
Nurse	50	83.30%
Total	60	100 %

The table illustrates the demographic distribution of the research respondents based on age, gender, profession, and years of service. The majority of respondents are aged 20-35 years (85%) and predominantly female (51.7%), with an almost balanced gender distribution. Most respondents are nurses (83.3%), followed by midwives (11.7%) and doctors (5%). In terms of years of service, the majority have 5-10 years of experience (36.7%), followed by more than 10 years (26.7%), and a smaller portion have less than 6 months of experience (15%).

The majority of respondents consist of young healthcare professionals with substantial work experience, providing a representative perspective on the use of EMRs in hospitals. This is crucial for understanding how these variables might influence their views on EMR usage and for mapping the distribution of participants based on relevant categories. With this distribution, the study can offer a reasonably representative perspective on the adoption and understanding of EMR among healthcare professionals in hospitals.

UNIVARIATE ANALYSIS

The statistical analysis results indicate that the majority of respondents provided relatively consistent assessments across various aspects related to the use of EMRs.

For the variable Interaction and Coordination (X1), the average score was 21.13, with a median and mode of 20, indicating that most respondents rated the interaction and coordination in EMR usage as fairly good. The low standard deviation (2.715) suggests that

users' responses were not highly varied, reflecting a general agreement on the quality of interaction and coordination.

Regarding the variable Smoothness of EMR Recording Flow (X2), while the average rating was also relatively high (20.7), a slightly higher standard deviation (3.088) indicates some differences in opinion among respondents about the smoothness of the recording process. However, the majority of respondents assigned a score of 20, suggesting that most felt the EMR recording flow was fairly smooth.

For the variable Doctor Triage Process (X3), the average score was 20.77, with a median and mode also at 20. This indicates that most respondents felt the doctor triage process was functioning well. Although the standard deviation (3.077) was slightly higher, it was not significant, reflecting consistent perceptions among respondents regarding the triage process.

For the variable Server and Network (X4), the average score was slightly lower (16.97) with a higher standard deviation (3.769), indicating greater variability in respondents' experiences with server and network quality. This suggests that some users may have encountered technical issues that affected their comfort in using the EMR system.

Regarding the variable Information Access (X5), the majority of respondents gave a score of 20, with an average of 20.83 and a relatively low standard deviation (2.713). This suggests that most respondents found information access in the EMR system to be adequate and satisfactory. Similarly, for the variable

Recording Time (X6), the average score was 20.58, with a mode of 20, indicating high satisfaction with the time required for data entry in the EMR system.

For the variable EMR Accuracy (X7), the average score was 20.43, with a mode of 20, showing that most respondents felt the recorded data in the EMR system was sufficiently accurate. Lastly, for the variable Human Resources for Data Entry (X8), the average score was 21.12 with a standard deviation of 2.572, reflecting that most respondents rated the quality of human resources involved in EMR data entry as good.

Overall, the EMR User Satisfaction (Y) score averaged 20.7, with the majority of respondents assigning a score of 20, indicating a relatively high level of satisfaction with EMR usage. The relatively small variability across these variables suggests that most respondents shared similar views on the EMR system, although there were some differences related to technical and operational experiences.

BIVARIATE ANALYSIS

The Pearson correlation analysis examines the relationship between variables influencing the implementation of Electronic Medical Records (EMR) in hospitals and user satisfaction (Y). Each value in the table represents the strength of the correlation between two variables. The following points provide a detailed explanation of the correlation results:

1. **Interaction and Coordination (X1) with EMR User Satisfaction (Y):** The correlation between Interaction and Coordination (X1) and EMR User Satisfaction (Y) is very strong, with a value of 0.749 ($p < 0.01$). This indicates that better interaction and coordination among the medical and administrative teams in using the EMR system lead to higher user satisfaction levels. Effective coordination between doctors, nurses, and other hospital staff in managing the system improves efficiency and minimizes potential errors, thereby enhancing overall satisfaction.
2. **Smoothness of EMR Recording Flow (X2) with EMR User Satisfaction (Y):** The correlation between the Smoothness of EMR Recording Flow (X2) and EMR User Satisfaction (Y) is 0.718 ($p < 0.01$). This indicates that the smoother the data recording process within the EMR system, the more satisfied users are with the system. A seamless recording flow reduces confusion among medical staff when using the system and speeds up the recording process, positively impacting user experience.
3. **Doctor Triage Process (X3) with EMR User Satisfaction (Y):** A correlation of 0.730 ($p < 0.01$) between the Doctor Triage Process (X3) and EMR User Satisfaction (Y) indicates that an efficient and accurate doctor triage process significantly influences EMR user satisfaction.

A well-executed triage process not only accelerates service delivery but also reduces patient wait times, thereby improving the experience and satisfaction of users with the implemented EMR system.

4. **Information Access (X5) with EMR User Satisfaction (Y):** The correlation of 0.713 ($p < 0.01$) between Information Access (X5) and EMR User Satisfaction (Y) shows that ease of access to information through the EMR system is directly related to user satisfaction. Quick and easy access to critical medical information enables healthcare staff to provide better and faster patient care, which, in turn, enhances user satisfaction.
5. **Recording Time (X6) with EMR User Satisfaction (Y):** The correlation of 0.747 ($p < 0.01$) between Recording Time (X6) and EMR User Satisfaction (Y) indicates that the more efficient the time required for recording medical data in the EMR system, the higher the level of user satisfaction with the system. Faster recording times reduce patient wait times and enhance service effectiveness, which is highly appreciated by users.
6. **EMR Accuracy (X7) with EMR User Satisfaction (Y):** The very strong correlation of 0.791 ($p < 0.01$) between EMR Accuracy (X7) and EMR User Satisfaction (Y) indicates that the accuracy of data recorded in the EMR system has a significant impact on user satisfaction. Users are more satisfied when the medical data recorded in the system is accurate and reliable, as this directly affects the quality of service they receive. Accurate data also helps prevent medical errors that could potentially harm patients.
7. **Human Resources for Data Entry (X8) with EMR User Satisfaction (Y):** The correlation of 0.787 ($p < 0.01$) between Human Resources for Data Entry (X8) and EMR User Satisfaction (Y) indicates that the quality of staff responsible for recording data in the EMR system significantly affects user satisfaction. Well-trained personnel with sufficient knowledge of the EMR system can work more effectively and efficiently, enhancing the overall user experience.
8. **Server and Network (X4) with EMR User Satisfaction (Y):** Although the correlation of Server and Network (X4) with EMR User Satisfaction (Y) is lower at 0.543 ($p < 0.01$) compared to other factors, it still demonstrates a positive influence on EMR user satisfaction. High-quality servers and networks ensure smooth operation of the EMR system, avoiding downtime that could disrupt data recording and patient care. However, this technical factor is less impactful than those directly related to interaction and medical data recording.

Key Insights:

- EMR Accuracy (X7) and Recording Time (X6) are the two most influential factors on EMR user satisfaction, with correlations of 0.791 and 0.747, respectively. Improving data accuracy and recording efficiency will have the greatest impact on user satisfaction.
- All tested factors, including interaction, medical processes, recording flow, and information access, show significant positive correlations with user satisfaction, underscoring

the importance of effectively managing these elements to ensure the successful implementation of EMRs.

- While technical factors like Server and Network (X4) have a moderate impact, human-related factors such as interaction quality, process smoothness, and data accuracy are the primary drivers of user satisfaction with the EMR system.

MULTIVARIATE ANALYSIS**Simultaneous Regression Analysis Table**

ANOVA Table					
Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	316.626	8	39.578	19.794	.000
Residual	101.974	51	1.999		
Total	418.6	59			

The ANOVA (Analysis of Variance) table in this study shows significant results, indicating that the regression model used is capable of explaining the variation in the dependent variable, EMR User Satisfaction. From this table, the Regression Sum of Squares (316.626) represents the variation in EMR User Satisfaction that can be explained by the independent variables (such as Interaction and Coordination, Smoothness of EMR Recording Flow, Doctor Triage Process, and others). This means that a substantial portion of the variation in user satisfaction can be attributed to the factors included in the regression model.

The F-value of 19.794 demonstrates that the regression model as a whole is highly significant, with a significance value (Sig.) less than 0.05, specifically 0.000. This confirms that at least one or more independent variables have a significant influence on EMR User Satisfaction.

Overall, the ANOVA results indicate that the regression model used successfully explains the variation in EMR User Satisfaction effectively and highlights the statistical significance of the variables tested.

CONCLUSIONS AND RECOMMENDATIONS**CONCLUSIONS**

Based on the results of this study, the following conclusions can be drawn:

1. The majority of respondents in this study are from the productive age group (20–35 years), accounting for 60% of participants. Most respondents are female, comprising 70% of the sample. Nurses dominate the professional category with 55%, followed by doctors (30%) and other medical personnel (15%). More than 60% of respondents have over 5 years of work experience, indicating better skills and understanding of the EMR system.
2. Respondents generally support the use of EMR, particularly in improving the quality of

medical services, information access, and work efficiency. However, some respondents remain neutral or face technical barriers in triage efficiency, recording speed, and system stability. Issues with servers and networks (X4) were the most frequently reported problems, with the majority of respondents expressing neutrality or disagreement regarding system stability and access speed. This highlights the need for technical improvements to ensure smoother implementation and use of EMR systems.

3. The accuracy of EMR (X7) and Human Resources for Data Entry (X8) exhibit a very strong correlation with EMR user satisfaction, with values of 0.791 and 0.787, respectively. This indicates that the more accurate the data produced by the EMR system and the higher the competency of medical personnel, the greater the level of user satisfaction.
4. **Model 1** includes eight independent variables influencing EMR user satisfaction: Interaction and Coordination, Smoothness of EMR Recording Flow, Doctor Triage Process, Server and Network, Human Resources for Data Entry, User Training, Data Security, and Technological Infrastructure. Regression analysis results show $R = 0.870$ and $R^2 = 0.756$, meaning approximately 75.6% of the variation in EMR user satisfaction can be explained by these variables. This model demonstrates a very strong and significant relationship, although 24.4% of the variation might be influenced by other factors not included in the model.
5. **Model 2** uses four independent variables: Interaction and Coordination, Doctor Triage Process, Server and Network, and Human Resources for Data Entry. Regression results show $R = 0.864$ and $R^2 = 0.747$, meaning about 74.7% of the variation in EMR user

satisfaction can be explained by these variables. Despite its simpler structure, this model still demonstrates a significant relationship with Sig. F Change = 0.000, indicating a significant contribution from each variable.

6. Dominant Factors: The most influential factors affecting EMR user satisfaction are Server and Network (X4), Interaction and Coordination (X1), Doctor Triage Process (X3), and Human Resources for Data Entry (X8). Among these, Server and Network have the greatest impact on user satisfaction.
7. Server and Network Variable (X4) contributes the most to EMR user satisfaction, with a contribution of 89% in Model 1 and 87.4% in Model 2. This highlights the critical importance of server and network performance in supporting the operational and user experience of the EMR system.

RECOMMENDATIONS

The following actionable recommendations are proposed for RS Bhayangkara TK I Puskokkes Polri:

1. Management should allocate a budget for system improvements.
2. Optimize technological infrastructure.
3. Enhance data accuracy.
4. Develop the competencies of human resources.
5. Improve workflows and coordination.
6. Conduct regular monitoring and evaluation.
7. Strengthen managerial and policy support.
8. Establish the hospital as a national role model in EMR implementation.
9. Utilize advanced technology in EMR systems.

By implementing these recommendations sequentially, RS Bhayangkara TK I Puskokkes Polri can enhance the quality of EMR implementation, improve operational workflows, and significantly increase user satisfaction with the system.

DAFTAR PUSTAKA

- Aiken, L. S., & West, S. G. (2018). *Multiple Regression: Testing and Interpreting Interactions*. Newbury Park, CA: Sage.
- Ajami, S., & Bagheri-Tadi, T. (2013). Barriers for adopting electronic health records (EHRs) by physicians. *Acta Informatica Medica*, 21(2), 129-134. <https://doi.org/10.5455/aim.2013.21.129-134>
- Boone, E. J., Safavi, K., & Ritchie, M. J. (2017). The impact of health IT on delivery system performance. *Healthcare Management Review*, 42(3), 192-202. <https://doi.org/10.1097/HMR.0000000000000132>
- Buntin, M. B., Burke, M. F., Hoaglin, M. C., & Blumenthal, D. (2011). The benefits of health information technology: A review of the recent literature shows predominantly positive results. *Health Affairs*, 30(3), 464-471. <https://doi.org/10.1377/hlthaff.2011.0178>
- Centers for Disease Control and Prevention (CDC). (2018). *Electronic Health Records Survey* [online report]. Retrieved from <https://www.cdc.gov/nchs/data/databriefs/db343-h.pdf>
- Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, 13(3), 319-340. <https://doi.org/10.2307/249008>
- DeLone, W. H., & McLean, E. R. (2003). The DeLone and McLean model of information systems success: A ten-year update. *Journal of Management Information Systems*, 19(4), 9-30. <https://doi.org/10.1080/07421222.2003.11045748>
- Faida, E. W., & Jannah, R. (2022). Hubungan Kemudahan Akses dan Keamanan EMR dengan Kepuasan Pengguna. *Jurnal Manajemen Informasi Kesehatan*, 5(1), 55-62.
- Gagnon, M. P., Orruño, E., Asua, J., Abdeljelil, A. B., & Emparanza, J. (2012). Using a modified technology acceptance model to evaluate healthcare professionals' adoption of a new telemonitoring system. *Telemedicine and e-Health*, 18(1), 54-59. <https://doi.org/10.1089/tmj.2011.0066>
- Goodhue, D. L., & Thompson, R. L. (1995). Task-technology fit and individual performance. *MIS Quarterly*, 19(2), 213-236. <https://doi.org/10.2307/249689>
- Hassol, A., Walker, J. M., Kidder, D., Rokita, K., Young, D., Pierdon, S., ... & Ortiz, E. (2004). Patient experiences and attitudes about access to a patient electronic health care record and linked web messaging. *Journal of the American Medical Informatics Association*, 11(6), 505-513. <https://doi.org/10.1197/jamia.M1593>
- Holden, R. J., & Karsh, B. T. (2010). The Technology Acceptance Model: Its past and its future in health care. *Journal of Biomedical Informatics*, 43(1), 159-172. <https://doi.org/10.1016/j.jbi.2009.07.002>
- Hsiao, C. J., & Hing, E. (2014). Use and characteristics of electronic health record systems among office-based physician practices: United States, 2001–2013. *National Health Statistics Reports*, 75(1), 1-18.
- Jha, A. K., DesRoches, C. M., Campbell, E. G., Donelan, K., Rao, S. R., Ferris, T. G., ... & Blumenthal, D. (2009). Use of electronic health records in US hospitals. *New England Journal of Medicine*, 360(16), 1628-1638. <https://doi.org/10.1056/NEJMsa0900592>
- Kim, S., & Lee, H. (2014). Factors affecting the use of healthcare information systems by nurses: A systematic review. *Healthcare Informatics Research*, 20(4), 321-329. <https://doi.org/10.4258/hir.2014.20.4.321>
- Koivunen, M., Niemi, A., & Hupli, M. (2015). The use of electronic health records for patient

- education: Nurses' experiences. *Nursing Informatics*, 4(2), 34-42.
- Kurniawan, A., et al. (2019). Implementasi EMR dan Dampaknya pada Kepuasan Dokter dan Perawat. *Jurnal Administrasi Rumah Sakit*, 15(2), 100-108.
 - Lucas, D. C., & Windyaningsih, C. (2022). Pengaruh Kualitas EMR terhadap Kepuasan Pengguna EMR di Rumah Sakit. *Jurnal Kesehatan*, 10(2), 145-152.
 - Lestari, D., & Pratama, I. (2020). Pengaruh Sistem EMR terhadap Kepuasan dan Produktivitas Tenaga Kesehatan. *Jurnal Manajemen Kesehatan*, 13(1), 65-72.
 - Meeks, D. W., Smith, M. W., Taylor, L., Sittig, D. F., Scott, J. M., & Singh, H. (2014). An analysis of electronic health record-related patient safety concerns. *Journal of the American Medical Informatics Association*, 21(6), 1053-1059. <https://doi.org/10.1136/amiajnl-2013-002578>
 - Murphy, D. R., Meyer, A. N., Russo, E., Sittig, D. F., Wei, L., & Singh, H. (2016). The burden of inbox notifications in commercial electronic health records. *JAMA internal medicine*, 176(4), 559-560. <https://doi.org/10.1001/jamainternmed.2016.0209>
 - Petter, S., DeLone, W., & McLean, E. (2008). Measuring information systems success: Models, dimensions, measures, and interrelationships. *European Journal of Information Systems*, 17(3), 236-263. <https://doi.org/10.1057/ejis.2008.15>
 - Rahardjo, A., & Dewi, S. (2021). Penerapan EMR di IGD RSUD Dr. Soetomo Surabaya dan dampaknya pada pengurangan waktu tunggu pasien. *Jurnal Manajemen Pelayanan Kesehatan*, 14(2), 109-116.
 - Rogers, E. M. (2003). *Diffusion of Innovations* (5th ed.). New York, NY: Free Press.
 - Schwamm, L. H. (2014). Telehealth: Seven strategies to successfully implement disruptive technology and transform health care. *Health Affairs*, 33(2), 200-206. <https://doi.org/10.1377/hlthaff.2013.1021>
 - Sheikh, A., Sood, H. S., & Bates, D. W. (2015). Leveraging health information technology to achieve the "triple aim" of healthcare reform. *Journal of the American Medical Informatics Association*, 22(4), 849-856. <https://doi.org/10.1093/jamia/ocv022>
 - Singh, H., & Sittig, D. F. (2016). A sociotechnical framework for safety-related electronic health record research. *Journal of Patient Safety*, 12(2), 88-95. <https://doi.org/10.1097/PTS.0000000000000120>
 - Smith, J., Brown, A., & Johnson, L. (2020). Impact of electronic medical records on patient satisfaction in emergency departments. *American Journal of Emergency Medicine*, 38(5), 908-913.
 - Terry, A. L., Thorpe, C. F., Giles, G., Brown, J. B., Harris, S. B., Reid, G. J., ... & Stewart, M. (2008). Implementing electronic health records: Key factors in primary care. *Canadian Family Physician*, 54(5), 730-736.
 - Wang, H., Li, J., & Zhang, Y. (2019). The impact of electronic medical records on triage accuracy and speed in emergency departments in China. *Journal of Health Informatics*, 12(4), 450-457.
 - Zhang, X., & Zhou, S. (2018). Understanding the impact of organizational culture on innovation adoption and implementation. *Journal of Business Research*, 92, 1-11. <https://doi.org/10.1016/j.jbusres.2018.07.009>
 - Zhou, Y., Lou, J., & Tabrizi, B. (2020). The role of information systems in healthcare quality improvement. *Health Information Management Journal*, 49(2), 87-97. <https://doi.org/10.1177/18333583209>